

TEXAS WATER COMMISSION

B. J. Wynne, III, Chairman
Paul Hopkins, Commissioner
John O. Houchins, Commissioner



Allen Beinke, Executive Director

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REGION VI
88 OCT -5 AM 10:14
J. D. Head, General Counsel
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October 3, 1988

Mr. R. B. Brown, Jr.
Acting Plant Manager
USX Corporation - USS Texas Works
P. O. Box 29
MS GO-03
Baytown, Texas 77522

Re: RCRA Facility Investigation (RFI) Workplan
Hazardous Waste Permit No. HW-50192
Industrial Solid Waste Registration No. 30577
EPA Identification No. TXD047467113

Dear Mr. Brown:

The Texas Water Commission and Region VI of the U.S. Environmental Protection Agency have reviewed the RFI Workplan submitted March 23, 1988 which discusses the investigative work to be performed at the industrial solid waste management units located at USS Texas Works.

Our evaluation of the RFI Workplan indicates that the proposed activities do not fulfill the requirements of Provision VIII.A. of the hazardous waste permit No. HW-50192. This provision requires the submission of a workplan which will determine if a release to the environment of hazardous waste or hazardous constituents has occurred at the subject units. Therefore we request that within sixty days of the date of this letter you resubmit the RFI Workplan, two copies to TWC and one copy to EPA, and incorporate the following items:

1. VIII.A.1.a: The areal extent and vertical extent above grade of the Debris Pile must be shown in Figure 1. In addition, the vertical extent of the Slag Storage Area and Inactive Waste Pile must also be addressed.
2. VIII.A.1.b: Estimated thickness of bottom sludges for each surface impoundment must be addressed in Figure 1 of the workplan.
3. VIII.A.1.d: All structures shown in Figure 1 of the RFI workplan should be more clearly identified and a scale indicated.
4. VIII.A.3: From reviewing Appendix IV of the RFI workplan (Construction Debris Pile Certification Report Excerpt), the following comments should be addressed.
 - a. The sampling and analysis method should be addressed in detail including references for Analytical Methods Numbers on Table 2;
 - b. The QA/QC of the sampling and analysis needs to be addressed;

- c. A more detailed description needs to be addressed on the justification of the location of the surface samples and test borings in the areas that are not covered by the grid pattern. Also include location of background sample BG5 (see Figure 1 of Appendix IV);
- d. Additional surface samples and test borings need to be taken at the steep bluff area;
- e. When conducting the EP-toxicity analyses, all test borings should be included. In addition, EP-toxicity analyses needs to be completed for surface samples (chosen at random) in the sloping vegetated area;
- f. Please submit Section I and Attachments 1 and 2 as referenced on pages 5 and 6; and
- g. Work done on the construction debris pile has a Certification (Appendix V); however, it must be filled out and signed.

The conclusion and recommendations specified in Section IV of Appendix IV are not consistent with the data. When comparing the total concentrations of chromium, lead, and cadmium to background, the results show a significant increase of all three parameters. In addition, boring #B-6 shows EP-toxicity concentration greater than the ground-water concentration of chromium. Based on these results, further hydrogeological investigation is necessary, which includes installation of ground-water monitoring wells. Please address the requirements of permit Provision VIII.

- 5. VIII.A.2.: Composite samples should not be taken at the Mill Scale Storage Piles. The eight sampling locations proposed in Figure 2 should be analyzed as separate entities. In addition, the following information is needed.
 - a. The location of the proposed borings in Figure 2 should be to scale;
 - b. Samples taken at 3 foot intervals should be taken from surface to a depth of 20 feet and then at 5 foot intervals;
 - c. Give a description of procedures to visually describe the color, soil type, according to the Unified Soil Classification system, and other visual characteristics;
 - d. Background sampling locations need to be proposed for the area; and
 - e. Analyses of total concentration of cadmium, chromium, and lead should be conducted for the proposed borings and compared to background.

As addressed in comment #4, comparing EP-toxicity concentration values to ground-water protection concentrations is not the only way to determine if contamination has occurred in the groundwater. Comparing total concentrations of the applicable parameters to background can also be a good indicator of possible ground-water contamination if there is a significant difference in the sampled concentration values as compared to background.

This type of analyses should be conducted for the Mill Scale Storage Area. The results of this analysis should be statistically compared (Chapter 3, Soil Sampling Quality Assurance User's Guide, EPA 600-4-84-043), and if there is a significant statistical increase in constituents above background incremental analysis must continue until, either a zone is reached where no significant increase is shown, or ground-water monitoring wells are installed to verify the presence of constituents.

6. All proposed borings and monitoring wells shown in Figure 2 must be to scale (this information should be shown on the facility map; Figure 1).
7. For comments on the inspection of the Slag Storage Area, refer to comment #5. In addition, 2 borings should be placed between the north/south line of the existing proposed borings of unit 16A.
8. For comments on the inspection of the Inactive Waste Pile, refer to comment #5.
9. VIII.A.4: Provision VIII.A.4 requires the permittee to conduct a hydrogeological evaluation for the surface impoundments. This is a direct requirement of the permit and cannot be deleted if results from an impoundment sludge sample show cadmium, chromium, or lead to be above drinking water standards. The permittee must revise the workplan to include a hydrogeological evaluation for the surface impoundments.
10. A more detailed description of the Mill Scale Containers is needed. This description should address the following.
 - a. Detailed engineering drawings of the containers;
 - b. Detailed description of closure (removal) of the containers; and
 - c. Past inspection records of the Mill Scale Containers.
11. The workplan should include an inspection checklist which shows the inspection items for each SWMU addressed in Provision VIII. This checklist should have the following information.
 - a. Name of the inspector;
 - b. Date of inspection;
 - c. List of items to inspect for each SWMU; and
 - d. A brief summary of any findings.
12. Figure 2 must be updated to clearly show which proposed wells are background wells. Again it should be specified that all information in Figure 2 should be shown on the facility map, Figure 1.

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13. Since Figure 2 has no scale it is difficult to determine if the spacing of the proposed monitoring wells is adequate. However, it appears that additional wells may be needed for the following units.
 - a. Surface Impoundment (#17) / Slag Storage Unit (16A & B):
 - Additional background well is needed up-gradient to the Slag Storage Unit;
 - Three or four additional down-gradient wells around the compliance boundary of impoundment and Slag Storage Area; and
 - General ground-water flow direction should be depicted as related to these units.
 - b. Surface Impoundment (#01, #18) / Inactive Waste Pile:
 - Additional background well needed;
 - One additional down-gradient well for impoundment #18 and Inactive Waste Pile is needed; and
 - General ground-water flow direction must be depicted.
 - c. Provide general ground-water flow direction for the Mill Scale Storage Piles and the Construction Debris Pile.
- Water used during drilling shall be potable water.
14. The RFI Workplan shall include provisions for evaluating well integrity for existing monitoring wells to be used in the Workplan. Well logs shall be examined to determine if the screens are located in the zone of interest. Also, the total depth of the well shall be checked. If existing wells have silted-up, they shall be developed before any water level measurements are taken. All necessary repairs shall be made to existing wells.
15. Concrete pads shall slope away from the well casings.
16. All water produced during development and purging of wells shall be collected and disposed of at an authorized industrial solid waste management facility.
17. All samples shipped to the laboratory for analysis should be sealed with a tamper resistant device which will indicate if any samples were tampered with or opened during shipment.
18. The procedure for the statistical analysis of the soil sample results should be discussed in Section IV of the workplan (e.g. specify the formula used).

Mr. R. B. Brown, Jr.

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October 3, 1988

Please note that USX Corporation must receive approval both by the Executive Director of the Texas Water Commission, and by the U.S. Environmental Protection Agency (EPA) prior to initiating the RFI. Further evaluation of your RFI Workplan will continue upon receipt of your response to this request. If you have questions or comments, please contact Leon Byrd at AC512/463-7977.

Sincerely,



Minor Brooks Hibbs, Chief
Permits Section
Hazardous and Solid Waste Division

CLB:bb

cc: John Kim, EPA - Dallas
Shirley Workman, EPA - Dallas
✓ Director, Hazardous Waste Mgmt. Division, EPA - Dallas
TWC Southeast Region Office - Deer Park

Mr. Minor Hibbs, Chief
Permits Section
Hazardous and Solid Waste Division
Texas Water Commission
P.O. Box 13087, Capitol Station
Austin, Texas 78711

JUN 24 1988



RE: RFI Work Plan U.S.X. Corporation - TXD 047467113

Dear Mr. Hibbs:

On June 6, 1988, the Environmental Protection Agency (EPA), Region VI, received comments from the Texas Water Commission (TWC) pertaining to a review of the RFI work plan from U.S.X. Corp, EPA I.D. Number TXD 047467113. This document establishes investigative procedures for seven solid waste management units (SWMUs) at the facility as required in Provision VIII of the Hazardous Waste Permit.

We have completed a review of the RFI work plan and offer the enclosed comments for your consideration. Please incorporate these comments into your comment letter to the facility.

If you have any questions or if we can assist you further, please contact me or John Kim of my staff at (214) 655-6785.

Sincerely yours,

Sam Becker, P.E.
Chief
Hazardous Waste Compliance Branch

Enclosure

6H-CP:KIM:jsk:5-6785:6-21-88:Disk #4:File Code: PER-5

6H-CP 6H-CP
Franke Honker

COMMENTS RFI WORKPLAN
U.S.X. CORPORATION
TXDO47467113

1. VIII.A.1.a: The areal extent and vertical extent above grade of the Debris Pile must be shown in figure 1. In addition, the vertical extent of the Slag Storage Area and Inactive Waste Pile must also be addressed.
2. VIII.A.1.b: Estimated thickness of bottom sludges for each surface impoundment must be addressed in figure 1 of the workplan.
3. VIII.A.1.d: All structures shown in figure 1 of the RFI workplan should be more clearly identified.
4. VIII.A.3: From reviewing Appendix IV of the RFI workplan (Construction Debris Pile Certification Report Excerpt), the following comments should be addressed.
 - a. The sampling and analysis method should be addressed in detail;
 - b. the QA/QC of the sampling and analysis needs to be addressed;
 - c. a more detailed description needs to be addressed on the justification of the location of the surface samples and test borings in the areas that are not covered by the grid pattern (see figure 1 of Appendix IV);
 - d. additional surface samples and test borings needs to be taken at the steep bluff area; and
 - e. when conducting the EP-toxicity analyses, all test borings should be included. In addition, EP-toxicity analyses needs to be completed for surface samples (chosen at random) in the sloping vegetated area.

The conclusion and recommendations specified in Section IV of Appendix IV is not consistent with EPA's determination. When comparing the total concentrations of chromium, lead, and cadmium to background, the results show a significant increase of all three parameters. In addition, boring #B-6 shows EP-toxicity concentration greater than the groundwater concentration of chromium. Based on these results, further hydrogeological investigation is necessary which includes installation of groundwater monitoring wells.

5. VIII.A.2: Composite samples should not be taken at the Mill Scale Storage Piles. The eight sampling locations proposed in figure 2 should be analyzed as separate entities. In addition, the following information is needed.

5. Continued:

- a. The location of the proposed borings in figure 2 should be to scale;
- b. samples taken at 3 foot intervals should be taken from surface to a depth of 20 feet and then at 5 foot intervals;
- c. description of procedures to visually describe the color, soil type, according to the Unified Soil Classification system, and other visual characteristics;
- d. background sampling locations need to be proposed for the area; and
- e. analyses of total concentration of cadmium, chromium, and lead should be conducted for the proposed borings as compared to background.

As addressed in comment #6, comparing EP-toxicity concentration values to groundwater protection concentrations is not the only way to determine if contamination has occurred in the groundwater. Comparing total concentrations of the applicable parameters to background can also be a good indicator of possible groundwater contamination if there is a significant difference in the sampled concentration values as compared to background. This type of analyses should be conducted for the Mill Scale Storage Area. The results if these analysis should be statistically compared (Chapter 3, Soil Sampling Quality Assurance User's Guide, EPA 600-4-84-043), and if there is a significant statistical increase in constituents incremental analysis must continue until, either a zone is reached where no significant increase is shown, or groundwater monitoring wells are installed to verify the presence of constituents.

6. All proposed borings and monitoring wells shown in figure 2 must be to scale (this information should be shown on the facility map; figure 1).
7. For comments on the inspection of the Slag Storage Area, refer to comment #5. In addition, 2 borings should be placed between the north/south line of the existing proposed borings of unit 16A.
8. For comments on the inspection of the Inactive Waste Pile, refer to comment #5.
9. VIII.A.4: Provision VIII.A.4 requires the permittee to conduct a hydrogeological evaluation for the surface impoundments. This is a direct requirement of the permit and cannot be deleted if results from an impoundment sludge sample show cadmium, chromium, or lead to be below drinking water standards. The permittee must revise the workplan to include a hydrogeological evaluation for the surface impoundments.

10. A more detailed description of the Mill Scale Containers is needed. This description should address the following.
 - a. detailed engineer drawings of the containers;
 - b. detailed description of closure (removal) of the containers; and
 - c. past inspection records of the Mill Scale Containers.
11. The workplan should include an inspection checklist which show the components to inspect for each SWMU addressed in Provision VIII. This checklist should have the following information.
 - a. name of the inspector;
 - b. date of inspection;
 - c. list of components to inspect for each SWMU; and
 - d. a brief summary of any findings.
12. Figure 2 must be updated to clearly show which proposed wells are background wells. Again it should be specified that all information in figure 2 should be shown on the facility map, figure 1.
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 - additional background well needed;
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 - general groundwater flow direction must be depicted.
 - c. Provide general groundwater flow direction for the Mill Scale Storage Piles and the Construction Debris Pile.

14. All samples shipped to the laboratory for analysis should be sealed with a tamper resistant device which will indicate if any samples were tampered with or opened during shipment.
15. The procedure for the statistical analysis of the soil sample results should be discussed in Section IV of the workplan (e.g. specify the formula used).

TEXAS WATER COMMISSION

Paul Hopkins, Chairman
John O. Houchins, Commissioner
B. J. Wynne, III, Commissioner



J. D. Head, General Counsel
Michael E. Field, Chief Examiner
Karen A. Phillips, Chief Clerk

Allen Beinke, Executive Director

June 3, 1988

Mr. William K. Honker, Chief
Permits Section
Hazardous Waste Compliance Branch
U.S. Environmental Protection Agency
Region VI - 6H-CP
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Transmittal of RFI Deficiencies for USX Corporation - USS Texas Works
Permit No. HW-50192
Solid Waste Registration No. 30577
EPA Identification No. TXD047467113

Dear Mr. Honker:

In accordance with our recent discussions, enclosed for your information is a draft copy of the deficiencies we have noted in the RFI workplan submitted by the above-referenced permittee. This draft copy is furnished in order to facilitate the coordination of the final letter of deficiency that we will send out which will include both TWC and EPA comments.

Please return the enclosed TWC letter of deficiency with any additional EPA comments to this section for finalization.

If your staff has any questions concerning this matter, please contact Leon Byrd of the Hazardous and Solid Waste Permits Section at AC512/463-7977.

Sincerely,

Minor Brooks Hibbs, Chief
Permits Section
Hazardous and Solid Waste Division

CLB:bb/lc
Enclosure

brown:clb

LB BYRD
MAUK MAUK
HIBBS

Mr. R. B. Brown, Jr.
Acting Plant Manager
USX Corporation - USS Texas Works
P. O. Box 29
MS GO-03
Baytown, Texas 77522

Re: RCRA Facility Investigation (RFI) Workplan
Hazardous Waste Permit No. HW-50192
Industrial Solid Waste Registration No. 30577
EPA Identification No. TXD047467113

Dear Mr. Brown:

We have reviewed the RFI Workplan submitted March 23, 1988 which discusses the investigative work to be performed at the industrial solid waste management units located at USS Texas Works.

Our evaluation of the RFI Workplan indicates that the proposed activities do not fulfill the requirements of Provision VIII.A. of the hazardous waste permit No. HW-50192. This provision requires the submission of a workplan which will determine if a release to the environment of hazardous waste or hazardous constituents has occurred at the subject units. Therefore we request that within thirty days of the date of this letter you resubmit the RFI Workplan, two copies to TWC and one copy to EPA, and incorporate the following items:

1. Figure 1 should be drawn to scale.
2. The RFI Workplan shall be revised to include, in Appendix IV, a complete Section I, Attachment 1, and Attachment 2.
3. The RFI Workplan Appendix IV, Section II, Figure 1 shall be revised to include the location of background sample BG5.
4. Appendix IV of the RFI Workplan shall be revised to include a discussion of soil-sample preservation and shipment, analytical procedures, and chain of custody.

5. Table 2, page 16 of the RFI Workplan shall be revised to include references of Analytical Methods Numbers.
6. Work done on the construction debris pile has a Certification (Appendix V); however, it must be filled out and signed.
7. Water used during drilling shall be potable water.
8. New monitoring wells shall be located as close as possible to the down-gradient edge of the waste management units.
9. The RFI Workplan shall include provisions for evaluating well integrity for existing monitoring wells to be used in the Workplan. Well logs shall be examined to determine if the screens are located in the zone of interest. Also, the total depth of the well shall be checked. If existing wells have silted-up, they shall be developed before any water level measurements are taken. All necessary repairs shall be made to existing wells.
10. Concrete pads shall slope away from the well casings.
11. All water produced during development and purging of wells shall be collected and disposed of at an authorized industrial solid waste management facility.

Please note that USX Corporation must receive approval both by the Executive Director of the Texas Water Commission, and by the U.S. Environmental Protection Agency (EPA) prior to initiating the RFI. Further evaluation of your RFI Workplan will continue upon receipt of your response to this request.

If you have questions or comments, please contact Leon Byrd at AC512/463-7977.

Sincerely,

Minor Brooks Hibbs, Chief
Permits Section
Hazardous and Solid Waste Division

CLB:bb

cc: John Kim, EPA - Dallas
Shirley Workman, EPA - Dallas
Director, Hazardous Waste Mgmt. Division, EPA - Dallas
TWC Southeast Region Office - Deer Park